



DSLR PHOTOGRAPHY

TIPS TO MASTER YOUR DSLR CAMERA

that are separate and more durable. Some photography, such as landscape photography, might not even need a flash, while it can be important for others, such as portrait photography.

If you are planning to do some advanced flash photography, then you should consider a separate one that is not attached to the camera.

- **Extra Batteries:**

When buying a camera, it will include one battery and charger. But that won't be enough if you plan on going on long hikes, and you never know when you might lose the perfect shot to a dead battery. So, you should get at least one backup battery for in case you need it.

End Note

To conclude DSLR photography seems easy to begin, just buy a camera and start shooting but in reality DSLR photography is both an art and a science that takes time to learn.

Only when you understand the components and working of your DSLR camera, you will be able to master it.

It might be overwhelming for a beginner to learn everything in one sitting, I advise you to start small and put in practice whatever things you learn.

Keep coming back to this guide and apply on field as you begin to dig deeper; very soon you will be able to develop your own techniques and a photographer's intuition. All the best!

photographer's mission. I'm the best.

will let you enhance it much more than when you were shooting in JPEG or TIFF.

Many modern DSLRs allow you to shoot in sRaw. This has many of the RAW benefits but takes up less space on the memory card. While this is a better alternative if you are low on space, sRaw uses fewer pixels, meaning the resolution won't be the same as a proper RAW format.

- **What is White Balance?**

When shooting with the jpeg format stated above, make sure to set the white balance before you take a photo. White balance has a remarkable impact on the color tone of your photographs. You might have seen that the pictures you take sometimes have a bluish tone to them, or that everything looks kind of orange. While it is easy to correct the image on a computer, it is much better to just get it right while taking the picture instead.

Light sources, like the sun, fluorescent strips, light bulbs, etc all produce

everything looks kind of orange. While it is easy to correct the image on a computer, it is much better to just get it right while taking the picture instead.

Light sources, like the sun, fluorescent strips, light bulbs, etc all produce light of different wavelengths. This, in turn, affects the colors that we see and can be described as color temperature. Light that comes from fire or sunrise/sunset, are warm, and carry a lot of red and orange wavelengths. Light from fluorescent strips, for instance, is much cooler and carry blue wavelengths. These colored light gets reflected off of surfaces, but our brain counter it automatically so that we still see white objects as white. The camera, however, is not as clever as our brain, so unless it is told to balance the effect, it will record the orange, red, or blue color tones on the images.

Because color temperature of individual light sources is something that is familiar, a number of presets are already built into cameras to help you correct the colors of light in most situations. You can, for instance, warm the cool light, and vice versa. There is also an auto white balance feature, which can try to determine the color of light by identifying the primary color of the location and then reverse it. But this method might not always be correct, which would leave you with imprecise colors. So, rather set the color balance before taking a picture to make sure that you get the colors you want.

through.

The aperture uses "f-stops" to measure the ratio of focal length over the diameter of the opening. A bigger aperture would have a smaller f-number and vice versa.

For example:

- $f/2.0$ - big aperture, wide opening, lets in more light.
- $f/22$ - small aperture, narrow opening, less light.

If you reduce the aperture by one full f-stop, then the amount of light that enters the camera would be halved.

Aperture is one of the most essential features of photography, because it has a direct impact on the depth of field.

A big depth of field, that is acquired by using a small aperture, means that a huge distance of the scene is in focus. Perfect for capturing images of landscapes.

it has a direct impact on the depth of field.

A big depth of field, that is acquired by using a small aperture, means that a huge distance of the scene is in focus. Perfect for capturing images of landscapes.

A smaller depth of field, that is acquired by using a big aperture, means that only the subject appears in focus while the background is softer and blurrier. Perfect for capturing images of wildlife.

So, when using this shooting mode, you have complete control over the depth of field while leaving the other features to the camera.

2. Aperture and Focus Lock:

If the main target of your photo isn't in the center of the frame, then you won't be able to focus or correctly expose it, because the camera's focusing grid and light metering is usually positioned in the center. Most DSLRs have a Focus Lock button used to fix this. So, when the target is focused, simply lock this setting and you are free to move the frame to the scene you want to capture. With the setting locked, the DSLR will then remember where you want the focus.

One disadvantage of Focus Lock is that it locks the exposure with the

Chapter Nine: Guide to Building Your DSLR Gear

Photography is one of the most expensive hobbies or careers to have. Besides a camera, there is some extra, essential gear you will need.

- **Tripod:**

A tripod is of incredible value for many photographers. However, it depends on what is going to be captured. Someone who mainly concentrates on landscape photography, for instance, will almost always use a tripod. Wedding, street, or portrait photographers might also use it quite often.

The type of tripod that you buy also plays a huge role. You might be able to get a lightweight tripod for pretty cheap, but it won't be stable

concentrates on landscape photography, for instance, will almost always use a tripod. Wedding, street, or portrait photographers might also use it quite often.

The type of tripod that you buy also plays a huge role. You might be able to get a lightweight tripod for pretty cheap, but it won't be stable, especially in windy conditions. Then again, getting an extremely stable tripod made of carbon fiber will be very costly. It is recommended to buy a tripod in the middle-class range when you are first starting out. One that isn't too cheap or too expensive.

Never buy a tripod that is made from plastic. Aim for one that is lightweight and made from aluminum. As you get into the more advanced stages of photography and want to upgrade the tripod, you should get one that is high quality and made from carbon fiber.

But, buying a tripod is not the end of it. You also must get a tripod head. The tripod might include one already, but if it doesn't then it means you will have to buy one separately. Tripod heads are essential, as they allow you to move the camera around to take pictures. It is recommended to buy a ball-head and not a pan-tilt head, because it is smaller and just as stable as the latter. If you are going to be taking a lot of videos, then opt for a pan-tilt head instead, but if you are going to take more photos than videos then a ball-head is the perfect choice.

Chapter Three: DSLR

What to Know

Before You Buy

DSLR Buying Guide – Things to Know

When buying a DSLR camera, you might be overwhelmed by the number of buttons and dials. This could easily tempt you to put the DSLR on Auto mode and just start shooting. It should be fine for a while, but you won't get a taste of the DSLR's full creative features that way.

- **Shooting Modes:**

Shooting modes are usually found on a dial that is labeled with M, Av,

- **Shooting Modes:**

Shooting modes are usually found on a dial that is labeled with M, Av, Tv, P, Auto, etc. Don't let it worry you if your dial has different abbreviations. Some manufacturers use other abbreviations for the same shooting modes, but they still function the same way.

The selected shooting mode controls how the DSLR behaves when the shutter is pressed. If, for example, you select the Auto mode, the DSLR will automatically control everything regarding exposure, shutter speed, aperture, etc. Other modes will give you more control.

Here is what each of them does:

- 1. Aperture Priority: Av or A**

This is a semi-automatic shooting mode. If you select this mode, you can set the aperture and the DSLR will handle the shutter speed automatically.

The aperture is the size of the lens gap through which light moves when the shutter is opened. The bigger the aperture, the more light can pass

9. Unnecessary Features and Sound Effects Are Active

Some DSLRs have features that you don't need and probably will never make use of. Most people just ignore these features and let it drain the battery life little by little.

Sound effects are also useless to have on and are most of the time just there to drain the battery. The best thing to do is to disable them.

- **Shutter Speed Mistakes:**

1. Blurry Image

Usually a blurry picture is caused by the shutter speed if you know for a fact that the lens is clean and you are not using a filter. One of the reasons for this is because of shaking or swaying when you are holding the camera in your hand. You might feel like you are in control, but nobody is capable of being completely still.

a fact that the lens is clean and you are not using a filter. One of the reasons for this is because of shaking or swaying when you are holding the camera in your hand. You might feel like you are in control, but nobody is capable of being completely still.

A fix for this is, is to turn the focal length to a fraction under one. That is the slowest shutter speed to use to mitigate blur from handheld shots. For example, if the focal length is 30mm, you shouldn't shoot slower than 1/30 second. Focal lengths above 200mm respond much faster to motion, so you'll have to adjust a faster shutter speed to cancel out the effect.

Another reason for the blur might be because you are not gentle enough when pressing the shutter button. This can cause the camera to move as you take the shot. A remote shutter release is an ideal fix for these situations.

If you still get blurred images no matter what you do, then you will have to use a tripod. Just be careful of using cheap tripods, because those that are made of cheap materials might still cause minor blurring because of vibrations, etc.

2. Frozen Image

All pictures are motionless, but some pictures can appear too still. If

Chapter Two:

DSLR in depth

Here in chapter we will explore in depth the various components that a DSLR camera constitutes.

- **Reflex Mirror:**

The reflex mirror works by reflecting the light from the lens into the pentaprism, which allows you to look through the viewfinder to preview the image. It can be found in front of the shutter and sensor where it is set at an angle to prevent the light from hitting them.

- **Shutter:**

where it is set at an angle to prevent the light from hitting them.

- **Shutter:**

The shutter is like a curtain in the front of the camera sensor which stays shut until the camera takes a shot. When a picture is taken, the shutter opens to let light pass through the lens before it shuts again. The button used to take a shot is called the "shutter button" because it activates the shutter function.

- **Image Sensor:**

The sensor is a solid-state tool that is used to capture light needed to form a digital photo on the LCD monitor or viewfinder. You can think of the sensor as an electronic substitute of a film cartridge. It is the soul of the camera and can be found in front of the shutter. The sensor determines image size, depth of field, lenses, dynamic range, resolution, and even the camera body size. It also decides the quality of the pictures and how big they can be scaled or printed. Furthermore, the sensor size has an influence on what you see through the viewfinder.

Condensation forms when damp air is hotter than a specific surface. Take, for instance, a bucket of ice. If you put it outside in the warm air on a summer day, it will begin to "sweat". The same thing can occur inside your camera and damage the image sensor.

To avoid this, you should not take pictures in extremely humid environments and conditions. Take note that you should never take a cold camera into a hot room. Before you enter such a room, first place the camera into a sealable bag. This will let the camera warm up gradually without the risk of moisture condensing inside it.

You'd usually do the same with batteries by keeping them close to your body in very cold conditions so that they would keep warm. But you should not let them heat up too much, otherwise it will create condensation as well.

3. DSLR and Exposure to Rain and Snow

Like with all electronic devices, you don't want water to get inside. It can either kill the device slowly by forming rust on the components or can short

3. DSLR and Exposure to Rain and Snow

Like with all electronic devices, you don't want water to get inside. It can either kill the device slowly by forming rust on the components or can short out and completely kill the camera. This can happen because of any of the following mistakes:

Getting the camera wet in the rain or snow, spilling water on the camera, or dropping it into large bodies of water such as puddles, dams, or pools.

If you have to take photos in rainy or snowy conditions, you can either cut a hole in a sealable bag and then stick the lens through to keep it somewhat protected, or you could buy waterproof housing. The last option is usually very expensive, so it is up to you how important photography is to you.

If your camera does get wet, immediately turn it off and remove the battery. Never turn on a wet camera, even just to check if it is still in working condition. As long as there is no electricity running through the camera until it is dry, it should survive. But if the camera shuts down on its own, it might be too late to save it. Put the camera in a sealable bag with packs of dehumidifying silica gel and then immediately take it to a camera service center.

you feel that your photos appear frozen in time, you should look at the shutter speed. The faster the shutter speed, the bigger the freeze effect will be. This also depends on how fast the target is moving. But the same things apply no matter how fast the target is. If you want less freezing, then just slow down the shutter speed.

These freeze shots are not actually always a bad thing. They are perfect for capturing high-motion targets such as wildlife, sport, vehicles, stunt performers, etc. But you should avoid it otherwise, because the picture can appear unnatural.

When taking frozen images, but still want it to look natural, try a panning shot by following the target so that the background appears blurred or adjust the composition.

3. Over-Exposed Image

When the shutter speed is slow, the sensor is more exposed to light. This can cause the picture to appear too bright. Some ways to fix this is to decrease the ISO, make the aperture smaller, or just use another metering mode. But generally, increasing the shutter speed will help if

When the shutter speed is slow, the sensor is more exposed to light. This can cause the picture to appear too bright. Some ways to fix this is to decrease the ISO, make the aperture smaller, or just use another metering mode. But generally, increasing the shutter speed will help if you are aiming for effects such as creative blur or motion freezing.

4. Image Appears Slightly Black

This is caused by speedlights and external flashes. Flashes are so fast that the shutter speed usually doesn't matter, but it can happen that the flash doesn't always work as intended with the shutter. This occurs when the shutter speed is too fast.

All modern cameras have a spec called Flash Sync Speed that shows the fastest shutter speed you can use with the flash. When using the flash with a faster shutter speed causes partially black picture. This is because when the shutter speed is too fast, the bottom part closes before the top part has finished closing so the flash doesn't get time to strike the whole sensor.

This can be fixed if your DSLR has a feature called High Sync Speed, usually found in mid-tier to upper-tier cameras.

Chapter One:

Introduction

What is DSLR?

DSLR is the abbreviation of Digital Single Lens Reflex. This refers to a digital camera that can use a mirror mechanism that reflects light from the camera lens and then sends it through a prism, or series of mirrors, to the optical viewfinder.

This means that the DSLR's lag time is near-zero, which is perfect for action photography. It has large image sensors capable of producing high-quality pictures in real-time. So, what you see through the lens is the exact scene you are going to capture. This can be anything from sleeping animals to drag races.

Many people use smartphones or compact digital cameras to take

high-quality pictures in real-time. So, what you see through the lens is the exact scene you are going to capture. This can be anything from sleeping animals to drag races.

Many people use smartphones or compact digital cameras to take pictures since they are more familiar and advertised everywhere.

DSLR cameras have been mostly used by professionals and rich photo enthusiasts up until 2005.

But because of the price drop, it is now more competitive with high-end compact cameras. Let's get into the details of the most important part of a DSLR camera, its lens.

- **Lens:**

One of the best things about DSLR photography is the capability to change lenses. The lens is made of glass and one of the most essential parts of the camera, because this is where light enters to reach the camera sensor. Some cameras have interchangeable lenses, which allows you to switch lenses for use in different types of photography.

To understand how lenses work, you first have to know the different types:

- **Learn How to Focus:**

No matter what shooting mode you use or how well you understand ISO, there will most probably always be something on the image you want to focus on. If you don't obtain that focus, the outcome of the picture might not be how you imagined.

Just like with shooting modes, there are a few focus modes to be aware of:

1. Autofocus Modes - DSLRs have a few autofocus modes, but the two most important ones are AF-S and AF-C.

2. AF-S: Autofocus-Single - This is the best mode for taking pictures of stationary subjects, like buildings, landscapes, etc. When half-pressing the shutter, the focus will be obtained and kept on the point as long you hold down the button. In order to adjust the focus, you will have to let go of the button and follow the same process from the start.

3. AF-C: Autofocus-Continuous - This is the best mode for taking pictures of moving subjects, like wildlife or sports. When half-pressing the shutter, the focus will be obtained and kept on the target. The focus will

button and follow the same process from the start.

3. AF-C: Autofocus-Continuous - This is the best mode for taking pictures of moving subjects, like wildlife or sports. When half-pressing the shutter, the focus will be obtained and kept on the target. The focus will adjust with the moving target and keep on refocusing until the picture is taken.

Note that these modes are not the same as the AF/MF switches on the lens. AF refers to autofocus, and MF refers to manual focus. What the switch does, is to enable either auto- or manual modes. For example: if you want to use the autofocus modes above, you will have to make sure that the lens is set to AF and not MF.

Focus Points:

Both focus modes depend on something that is called focus points. When looking through the viewfinder, you will most likely see squares and dots spread out on the screen. When half-pressing the shutter, you will notice how one of these squares turn red. That highlighted square refers to the active focus point, which is the area within the frame where the camera is focusing on.

The newest DSLRs can have over 50 focus points, which can tempt many

Memory card is one of the most important piece of equipment a photographer need. This is where all the photos and videos are stored to transfer from the camera to the computer. Some DSLRs already includes one when bought, so make sure before you waste money on one... unless you want to invest in a better one.

The reason you'd want to get a better memory card, is so that you can save more photos. You should get a memory card that is at least 16 gigabytes. If you plan to take a lot of high-quality photos or are into photography like wildlife, sports, or travel, then a 32 or 64-gigabyte memory card would be more ideal.

Another reason to consider another memory card is for speed and quality. A fast memory card has some nice benefits where the best one is that it reduces the time the DSLR buffers. This can both save you time and let you take longer bursts much easier.

Compared to the other essential equipment, a memory card is one of the cheapest, so there is no reason for you to not get the best one.

- **Post-Processing Software:**

time and let you take longer bursts much easier.

Compared to the other essential equipment, a memory card is one of the cheapest, so there is no reason for you to not get the best one.

- **Post-Processing Software:**

Most photographers edit their own photos. But to edit, you require post-processing software. The camera does include free software, but it might not have all the features you'd want to use.

1. Adobe Photoshop is usually the first choice when it comes to photo editing software but is aimed more at digital artists and graphic designers because of its detail so photographers might find it a bit much.

2. Lightroom, also an Adobe program, is more dedicated towards photographers, but has a monthly fee of around 10\$. Most people want to avoid a monthly subscription so, although this program is ideal, it might not be for everyone.

A good alternative for Photoshop is a program called Affinity Photo. Other popular programs include:

- ACDSee Ultimate
- Corel AfterShot Pro

If you need to set up the right settings, the DSLR has everything you need right there on the camera body. Only use the LCD to review your photos and you might find that the battery operates for much longer than before.

If you don't want to stop using the screen entirely, at least just decrease the time you use it for. You can also disable post-shot reviews and reduce brightness to enhance the battery even more.

2. Using the Autofocus and Continuous Focus Feature

Autofocus is managed by tiny motors that depend on battery power. Whenever you hear the focusing components, the battery loses energy little by little.

Using continuous focus is even worse as it drains the battery even more rapidly. The only reason you need to use this mode is for action or sports shots.

Using continuous focus is even worse as it drains the battery even more rapidly. The only reason you need to use this mode is for action or sports shots.

3. Zooming in Too Much

As one of the rules of photography, you should only use the zoom function if you absolutely can't get closer to the target. So, if you can, rather move towards the target with your own feet rather than being lazy and zoom in.

Not only will your battery last longer, but you will also have better results. Only if your DSLR is equipped with a manually adjustable zoom ring, you shouldn't worry about battery life.

4. Pressing the Shutter Button

Every time you press the shutter button in order to focus a shot before taking it, the lens resets and refocuses, causing the motors to sound up. So, if you are not ready to take a shot, don't keep your finger on that shutter.

4. DSLR and Exposure to Sand and Grit

Sand and grit are something you absolutely don't want to get into the camera body. Those tiny specs might seem insignificant but can cause a lot of damage. It can scratch surfaces and jam components such as the shutter. It can even be dangerous if it manages to scratch the battery. If you want to take your DSLR to the beach, for instance, you should be very careful.

Don't change the lens, replace batteries, or switch memory cards while standing on the beach, especially if it is windy.

Don't take photos too close to the ground and always use an UV filter to keep the sand from striking the lens. Waterproof housing might also be handy in these conditions if you are serious about keeping your camera unharmed.

If sand or grit does manage to get into the camera, don't try to get it out yourself. Rather take it to a camera service center where people are qualified to handle these kinds of problems.

If sand or grit does manage to get into the camera, don't try to get it out yourself. Rather take it to a camera service center where people are qualified to handle these kinds of problems.

- **Focusing Screen:**

This is a flat, translucent glass surface on which the reflex mirror projects the image seen on the viewfinder. They help with focusing and composition and can be replaced by a new one with more features, such as grids, brightness enhancement, crop lines, etc. The focusing screen can be seen by removing the condenser lens and then looking inside the camera body above the reflex mirror.

- **Condenser Lens:**

This is an optical lens that focuses and controls light that passes through the camera. It can be found between the pentaprism or pentamirror and the focusing screen.

- **Viewfinder:**

The viewfinder is a small rectangle on top of the camera. The DSLR

- **Viewfinder:**

The viewfinder is a small rectangle on top of the camera. The DSLR might keep changing and improving with every new model, but the viewfinder always stays the same. The viewfinder is the eye to your photography and the image it frames will be the one you capture. If you look through the viewfinder, it will help stabilize the camera more, because your body will support the camera braced against it. This also enables you to take sharper photos, because your arms are not outstretched.

There are two main types of viewfinders:

1. Pentamirror - The pentamirror can usually be found on entry-level DSLRs and is made from plastic, simply because it is much cheaper and lighter than glass to mass produce. Instead of using a solid block of glass like the pentaprism, the pentamirror only uses 3 mirrors to accomplish the same task but supply a lower quality and brightness picture in the viewfinder than the pentaprism.

2. Pentaprism - The pentaprism can usually be found on professional-grade DSLRs and is higher quality than a pentamirror. They use a five-sided prism to divert light from the lens to the viewfinder and divert the

Sensor Types:

The most popular type of sensors are the CCD and CMOS.

1. CCD (Charged Coupled Device) Sensor

The CCD sensor has been around for many years and has a higher-grade image quality than CMOS sensors, as well as superior noise control and dynamic range. But because of the higher power consumption and basic construction, CCD has been replaced by CMOS alternatives. They are, however, still mostly used in budget compacts.

2. CMOS (Complementary Metal-Oxide-Semiconductor) Sensors:

Compared to CCD, the CMOS has always been seen as inferior quality, but are now built to match or even best the standard CCD. They are more efficient, needs less power to operate, and are more suitable for high-speed capture.

There are 3 basic sizes for a DSLR:

but are now built to match or even best the standard CCD. They are more efficient, needs less power to operate, and are more suitable for high-speed capture.

There are 3 basic sizes for a DSLR:

1. Full Frame - This is called full frame because it is similar to a 35mm film. It is the largest size sensor with almost twice the size of an APS-C sensor.

With a full-frame sensor, there is no crop factor, so the scene you see through the viewfinder is the picture you are about to capture. Usually, the bigger the sensor, the bigger is the camera body and the larger the necessary lenses will have to be to take advantage of it.

2. APS-C - This is the most common sensor size and used for many consumer and semi-professional DSLRs, but not all their dimensions are equal. The APS-C sensor has a crop factor that varies from 1.5x to 1.7x.

3. Four Thirds - These types of sensors are about a quarter of the size of full-frame sensors and mainly used in Four Thirds DSLRs. They have a crop factor of 2x, which double the active focal length of mounted lenses.

- Photo Ninja
- ON1 Photo RAW
- Capture One
- Raw Therapee

You can't go wrong with any of these professional products, but it is important to just pick one of them so that you are able to learn it in-depth as you use it over time.

- **Remote Shutter Release:**

This equipment let you take a picture without touching the camera body and prevents any shaking or vibration from ruining the perfect shot. A remote shutter release is mostly used together with a tripod.

There are two kinds to choose from - wired and wireless. It generally

This equipment let you take a picture without touching the camera body and prevents any shaking or vibration from ruining the perfect shot. A remote shutter release is mostly used together with a tripod.

There are two kinds to choose from - wired and wireless. It generally doesn't matter which one you choose. Both can have more advanced features such as built-in timers, an LCD screen, and support for half-press. It is also possible to make your own remote shutter release if you have experience with DIY projects.

- **Cleaning Kit:**

It is so easy for the DSLR to pick up dust, dirt, or moisture within the body, lens, and accessories. If you don't do maintenance every now and then, the camera might end up with permanent damage. Dirty lenses and sensors can also ruin pictures.

Taking your camera and equipment to a professional service center is another option, but they are usually very expensive so will be much better for you to learn how to clean the DSLR on your own. Only rely on service centers for serious issues.

- **Monitor:**

Chapter Four: DSLR Buying Guide Part - II

- **The Exposure Triangle:**

ISO, aperture, and shutter speed form the exposure triangle by controlling the amount of light that enters the camera or the amount of light that the camera needs for the given exposure.

This means that it is important to understand the link that they form together to have full control of your DSLR. Changing one setting could influence the other two. For instance: Let's say you have an exposure of ISO 400, f/8.0, 1/10th second. If you'd reduced the depth of field and change the aperture to f/4.0, it means that the size of the aperture would have to increase by two full f/stops, which would increase the light that enters the DSLR by a factor of 4. So, to get the correct exposure, you could do any of the following:

ISO 400, f/8.0, 1/10th second. If you'd reduced the depth of field and change the aperture to f/4.0, it means that the size of the aperture would have to increase by two full f/stops, which would increase the light that enters the DSLR by a factor of 4. So, to get the correct exposure, you could do any of the following:

1. Decrease shutter speed by a factor of 4, bringing the values to ISO 400, f/4, 1/40th second.
2. Decrease ISO by a factor of 4, bringing the values to ISO 100, f/4, 1/10th second.
3. Decrease both shutter speed and ISO by a factor of 2, bringing the values to ISO 200, f/4, 1/20th second.

All three of these examples decreases the amount of light by a factor of 4, successfully countering the adjustment to the aperture. If you understand that they are linked together and that changing one setting have a direct influence on the other, it will help you master your DSLR in no time.

- **Metering:**

When you take a picture using a mode that automatically calculates exposure, such as shutter priority mode, aperture priority mode, auto-ISO etc., the DSLR will always try to determine an average exposure. It first

Chapter Five: DSLR Shooting Guide

- **Getting to Know File Types and Sizes:**

Your DSLR is capable of changing the size of the pictures that it takes, as well as the file type. Set the file size to the largest one to make sure that you use it to its full potential. A bigger file size means more megapixels. More megapixels means a better resolution.

The DSLR also has the option to choose whether to take pictures in RAW or "jpeg" file type. RAW file types are uncompressed and hold a lot of image data, allowing you to be a lot more flexible during post-processing on the computer. The downside to this is that the file size is huge, and it needs to process every file with special editing software.

Jpeg file types are compressed and automatically processed by the camera.

image data, allowing you to be a lot more flexible during post-processing on the computer. The downside to this is that the file size is huge, and it needs to process every file with special editing software.

Jpeg file types are compressed and automatically processed by the camera. They are usually ready to print straight from the camera and have a much smaller size compared to RAW file types.

So, when you are still a beginner, it is best to use jpeg until you have learned the basics of the DSLR first. RAW files are for more advanced users or professionals who want to get heavily into editing.

- **Shooting in RAW Format:**

RAW is a setting on the DSLR which keeps the data from the sensor in the most basic form so that you can process it later. For example, if the camera's white balance or photo style is wrong when taking the picture, you can adjust it later on the computer with a RAW editor.

Most of the time you will only get one opportunity to take a photo, especially when it comes to action scenes and wildlife. These opportunities won't wait for you to set the camera's settings for that special moment. But when you take a picture in RAW, everything doesn't have to be perfect. If the picture is under- or over-exposed, then the RAW format

The most interesting pictures are taking by trying out unique ways to capture a specific scene.

Update the Firmware. DSLRs, such as Canon, has continuous updates in order to improve the performance and reliability of the camera. So, check regularly to see if you have the latest firmware.

Some of the most recent models have a Live View where the camera displays the scene live on the LCD screen. This is turned off by default. This is especially useful when using the camera on a tripod.

Always pre-focus first by pressing the shutter button halfway down. Doing this will always give you clearer pictures. It also helps to guess where a moving target is going to be before it gets there so that you can pre-focus on that exact space and press down on the shutter as it moves into view.

Experimenting with your DSLR camera is the best way to learn what it is capable of. Test different settings while you are shooting different scenes so that you can see for yourself what the outcome would be. For instance, when taking a picture of running water, try fast and slow

into them.

Experimenting with your DSLR camera is the best way to learn what it is capable of. Test different settings while you are shooting different scenes so that you can see for yourself what the outcome would be. For instance, when taking a picture of running water, try fast and slow shutter speeds. When taking a picture of a landscape, try different aperture settings.

Chapter 7: Common Mistakes to Avoid

Before you go out into the world to take pictures with your new DSLR, you should take note of the following common mistakes to avoid in order to maximize the camera's lifespan and to protect it from damage.

1. DSLR and Extreme Heat Conditions

Most modern DSLRs are resistant to a wide range of temperatures, but you should still be careful, because intense heat can ruin your camera easily.

When the camera is exposed to extreme heat conditions, the seals that prevent dust and moisture from entering can dry out, as well as lubrication on moving

Most modern DSLRs are resistant to a wide range of temperatures, but you should still be careful, because intense heat can ruin your camera easily.

When the camera is exposed to extreme heat conditions, the seals that prevent dust and moisture from entering can dry out, as well as lubrication on moving parts. It is possible to repair the damage, but sometimes it is beyond repair. The heat can also damage the battery.

Don't leave your DSLR in direct sunlight. It will heat up fast and the UV rays can distort or deteriorate the body over time. You also don't want to leave your camera in an enclosed space, such as a car, on a very hot day. These spaces can be over 20 degrees hotter than the outside depending on the situation.

So, if it is over 38 degrees and up, you should rather take a few minutes to cool down the camera. If your camera has been exposed to the heat and starts to malfunction, turn it off immediately and take it to a service center as soon as possible.

2. DSLR and Exposure to Condensation

You should be careful when moving from places that rapidly change conditions from hot to cold or cold to hot, like when you go in and out of your home. Exposure to condensation can hold a huge risk for your camera.

Here are some examples of presets you can use:

1. **Daylight:** Use on clear, sunny days. This type of light is the most neutral setting.
2. **Shade:** Use when taking pictures in shaded areas. This type of light usually shows a cool, blue color on pictures, so you need to warm them up.
3. **Cloudy:** Use when taking pictures on cloudy days. This will add a warm color to daylight photos.
4. **Flash:** A flash adds a cool, blue color to pictures and needs to be warmed up.
5. **Fluorescent:** This setting neutralizes the blue and green colors that fluorescent light usually creates when taking pictures indoors.
6. **Tungsten:** Use indoors when taking pictures under glowing light bulbs, or outside under street lights, to counter and cool down the yellow colors.

So, if you want to correct the color temperature, set white balance manually instead of using the automatic feature. It is easy to determine the

fluorescent light usually creates when taking pictures indoors.

6. Tungsten: Use indoors when taking pictures under glowing light bulbs, or outside under street lights, to counter and cool down the yellow colors.

So, if you want to correct the color temperature, set white balance manually instead of using the automatic feature. It is easy to determine the right setting. When outdoors, just look at the sky and check what kind of day it is. When indoors, just check the lighting. With practice, this will become second nature to you fast.

picture, which reduces the overall image quality. The noise is usually more noticeable in the darker areas.

So, to get the highest possible quality result with the less noise, you must keep the ISO numbers as low as possible. For example:

- On a sunny day outside, use an ISO 200.
- On a cloudy day outside, use an ISO between 400 and 800.
- Indoors, you could consider an ISO of 1600 and up.

Most DSLRs nowadays have an auto-ISO function which sets the ISO automatically according to the amount of light you require for shooting, while also trying to keep it as low as possible. It is a useful tool for beginners, because you can just set a limit and forget about the setting until you get in a situation where the image appears too noisy or when you want to take landscape images using the lowest possible ISO.

until you get in a situation where the image appears too noisy or when you want to take landscape images using the lowest possible ISO.

analyses the scene to calculate the exposure so that all colors inside the picture will have an average of 18% gray, which is known as the "middle gray".

This process is known as metering. It is the reason why a picture of a bright, white location always appears darker than it actually is, or when taking a picture of a dark, low-lit room always appear brighter than how you see it. The camera always creates an average version of a scene with the correct exposure most of the time. You can, however, control the influence of the metering by choosing one of three metering modes:

Average: The camera analyzes the whole scene, from corner to corner, and creates an average exposure with 18% gray colors.

Center-weighted: The camera focuses on the center of the viewfinder, which takes up about 80% of the scene, and ignores the corners.

Spot metering: The camera focuses on a small spot on the scene, usually a small circle in the center of the viewfinder, which takes up about 5% of the scene. It analyzes the dark and light tones in that small area and makes the whole scene 18% gray from that analysis.

which takes up about 90% of the scene, and ignores the corners.

Spot metering: The camera focuses on a small spot on the scene, usually a small circle in the center of the viewfinder, which takes up about 5% of the scene. It analyzes the dark and light tones in that small area and makes the whole scene 18% gray from that analysis.

So, if you are a beginner, it is best to start on either average or center-weighted metering. Both should give a reasonably consistent estimate of the required exposure. If you choose one mode and use it for a while, you will begin to see how a scene looks when under/over exposed compared to when looking at it with your own eyes.

But how do you fix an under/over exposed scene? You do this by using exposure compensation.

Exposure Compensation is usually a small +/- button located near the shutter. It will let you increase or decrease the default meter reading so that it takes into account the actual brightness of the scene.

When a scene consists of mainly bright colors, it is usually rendered too dark. So, when taking a picture of snow, for example, you can press the positive exposure compensation to create a lighter scene than the average 18% gray. To correct a dark scene, which usually shows lighter with 18% gray average, just press the negative exposure compensation and the scene will appear darker than the 18% gray.

When taking a photo, the reflex mirror moves up, blocks the vertical passage, and let the light through. The shutter then opens to let the light reach the image sensor. The shutter stays open until the image sensor recorded the image before it closes. The reflex mirror moves back down to a 45-degree angle to continue its job by redirecting light into the viewfinder.

1. Kit Lens - These lenses are entry-level quality zoom lenses that are usually offered as a package with the DSLR. They are cheap and very flexible, perfect to give you an idea of the type of lens you want to buy in the future. The lens is mostly used for general purpose everyday shooting.

2. Prime Lens - Prime lenses have one focal length only so can't zoom at all. They are made especially for taking photos of portraits or people's photos with a blurry background but are becoming less popular because photographers find lenses with the ability to zoom more convenient. But that doesn't mean that you shouldn't consider them. Prime lenses have superior image quality and a fast aperture. While most photographers enjoy the convenience of zoom lenses, there are also those that like the challenge of using prime lenses, because it makes them think about the work they put into their photography rather than relying on a zoom lens.

3. Telephoto Zoom Lens - These lenses are the most popular type of lens for DSLR cameras and come with loads of configurations and quality settings. Zoom lenses enable you to take pictures of objects that

makes them think about the items they put into their photography rather than relying on a zoom lens.

3. Telephoto Zoom Lens - These lenses are the most popular type of lens for DSLR cameras and come with loads of configurations and quality settings. Zoom lenses enable you to take pictures of objects that are far away, such as sport or wildlife. It's a great benefit because you don't have to get physically closer to the target to get a clearer shot. The lenses can have a narrow range as well as long ones. Take note that the longer the focal length, the bigger the camera shake impact will be on your pictures, even though more lenses now come with an Image Stabilization feature to help prevent camera shake.

4. Wide Angle Lenses - These lenses are for users who want to take pictures with a wide perspective. They are especially useful for shooting landscapes and fitting in a group of targets. Wide angle lenses can be a prime lens, but also a lower end telephoto zoom lens. Take note that the wider the lens, the more it can distort the picture, especially near the edges of the picture. Sometimes it looks like a cool effect, but it can also be frustrating if the user doesn't want that type of effect.

5. Macro Lenses - These lenses are especially made for shooting things up close. A macro setting can also be found on many lenses and cameras already but won't fulfill the exact same results as a true macro

5. Automatic Flash is Switched On

The automatic flash feature is great for taking pictures during the night when the ISO settings don't give you acceptable results, but you really don't need it for taking photos during the day. So, if you see the flash going off in the middle of the day, then you should disable it immediately to save battery.

6. File Type is set to RAW

Taking pictures in RAW format does of course ensure that you get the best possible results, but it is not always needed. For many casual moments, such as spending time with your family, it is better to use other formats. RAW format should only be used for special moments where you need the best quality pictures, such as for weddings or landscapes.

7. Camera is in Record Mode

where you need the best quality pictures, such as for weddings or landscapes.

7. Camera is in Record Mode

Video recordings might give you good results but is just as good at draining the battery. The problem occurs when you forget that the camera is still recording. The icons that display the video camera mode is so small and almost identical to the standard mode that it is easy not to notice. So, what happens next is that you most probably press the shutter to take a picture just to find out later that you've actually recorded a video instead.

To keep this from happening you should always make sure that record mode is disabled once you are done using it and always turn the camera off before putting it away.

8. Power Saving Mode is Off

Activating power savings mode is a great way to avoid a lot of potential problems, such as the one described above. This mode can boost the battery by switching off the camera after a certain period of inactivity if you should forget to turn it off manually.

light through a sequence of mirrors. They also supply a brighter picture in the viewfinder than pentamirrors.

Viewfinders can be electronic or optical. DSLRs use an optical TTL viewfinder so that when you look through the lens, you see exactly what it shows on the sensor. An optical viewfinder doesn't consume power like an electronic viewfinder.

Electronic viewfinders, also known as digital, are the LCD screen that can be found on the back of the DSLR. This screen is generally used for reviewing photos or videos and shows the camera's settings, menus, and features.

The viewfinder also has a **diopter** for people who wear glasses. It works the same way as normal eyeglasses by correcting the vision and bringing everything into focus. You can tune the focus to receive a sharp picture with or without glasses. Diopters can be built in, or snap or slide onto the viewfinder and have a correction range from -3 to +1. To alter the diopter, center the DSLR on an item, look through the viewfinder, and adjust until you get a sharp vision of the item.

sharp picture with or without glasses. Diopters can be built in, or snap or slide onto the viewfinder and have a correction range from -3 to +1. To alter the diopter, center the DSLR on an item, look through the viewfinder, and adjust until you get a sharp vision of the item.

The viewfinder also consists of a magnification option. When it shows 1x magnification, it means that the viewfinder is using a 50mm lens, which is the standard, default view from the camera position to the object. The size of the picture will differ depending on the focal length of the lens. For example:

- **Wide angle lenses** - Object in the foreground looks large while those in the center appear smaller and far away.
- **Zoom, telephoto lenses** - Object appears close and large.

- **How does a DSLR work?**

When looking through the viewfinder, you see whatever is passing through the lens. Light that comes from the scene you want to capture, goes through the lens into the reflex mirror. The reflex mirror, that is positioned at a 45-degree angle inside the camera body, redirects the light vertically to the pentaprism or pentamirror, where it then converts that vertical light into horizontal light by redirecting it through two separate mirrors into the viewfinder.

- **Filters:**

Filters are put directly in front of the camera lens. In rare cases, they might go behind the lens. It is used to adjust the light that the DSLR captures and is an essential part of photography. There are four major types of filters, but you might not need more than one or two at most.

1. Clear Filters: Clear filters, also known as UV or Haze filters, are transparent and used to protect the lens. Good filters of this type are expensive, while cheap ones might notably reduce the photo quality. Some photographers use these filters all the time but is really only needed in the most intense conditions.

2. Neutral Density Filters: These filters are dark pieces of glass that help to decrease the amount of light that reaches the camera sensor. They are used to create a motion blur effect on pictures, or when using the flash in very bright conditions.

3. Neutral Density Graduated Filters: These filters smoothly change in a gradient from dark to clear. If you want to dim a section of a photo, such as the sky, while not changing the rest of the photo, then these filters will

used to create a motion blur effect on pictures, or when using the flash in very bright conditions.

3. Neutral Density Graduated Filters: These filters smoothly change in a gradient from dark to clear. If you want to dim a section of a photo, such as the sky, while not changing the rest of the photo, then these filters will be useful.

4. Polarizing Filters: These filters dim the sky and reduce specific reflections on the picture. They are especially important for many photographers who take photos of plants or water.

If you want to invest in filters, always buy a high-quality filter to ensure that your photo's quality remains good. The most important filter out of the four is the polarizing filter. The effect that these filters create is not possible to copy in post-processing.

- **The Flash:**

The flash is needed for many types of photography. It is useful for taking photos of people in the dark, or for modifying the light that shines on the person or thing you want to capture. It can also be used to brighten dark spots or shadows.

Many DSLRs include pop-up flashes already, but you can also buy ones

Chapter Six: DSLR Tips

Here are some of the handy tips that I have put together from my own personal experience:

You should have a UV filter for every lens that you own. It is much easier to replace a damaged lens filter than to replace the actual lens.

Make sure to invest in other equipment as well, such as a sturdy tripod and remote release. Both are needed for taking photos that involves long shutter speeds.

Never blow on or touch the mirror inside the camera body when the lens is off. If the sensor is damaged, you can just as well buy a new camera body. That's because it will cost an insane price to fix. So, get a dust blower or cleaning kit if you notice spots on the photos. If you are scared that you'll damage the camera. take it to a local camera store

Never blow on or touch the mirror inside the camera body when the lens is off. If the sensor is damaged, you can just as well buy a new camera body. That's because it will cost an insane price to fix. So, get a dust blower or cleaning kit if you notice spots on the photos. If you are scared that you'll damage the camera, take it to a local camera store with an in-house cleaning service.

Never change the lens outside in windy conditions. Before leaving the house, make sure that the main lens is already on the camera. If you must change the lens outside, let the camera body face downwards so that dust doesn't get onto the camera's sensor.

If your pictures get out blurred a lot, change the settings to a faster shutter speed. The faster a picture is taken, the less chance there will be for it to be affected by the camera shake. Hold the camera as close to your body as you can or rest on a nearby object, such as a tree, to make the camera steadier.

When you start using your new DSLR camera, it is easy to forget to set up the right date and time. Make sure that you set this up as soon as possible or you will have a hard time tracking the pictures you take.

Shoot from different perspectives. Spice up your photography by using different depth and dimensional space in your images. Shoot from above, get down on the ground, shoot at eye level, move in close, etc.

focus. This could lead to incorrect exposures. The Exposure Lock button, usually found at the back of the camera, can be used to fix this issue.

3. Shutter Priority: Tv or S

This is similar to the aperture priority mode as it is also a semi-automatic shooting mode. But for this one you control the shutter speed while the DSLR controls the aperture. The shutter speed is measured in seconds, or fractions of a second, and is the amount of time that the shutter stays open while taking a picture. The longer that the shutter stays open, the more light gets to pass through the sensor to get captured.

To let something that moves fast appear frozen, you would need a short shutter speed. This refers to taking pictures of wildlife, sports, or action scenes.

A long shutter speed would make the moving target appear soft and

To let something that moves fast appear frozen, you would need a short shutter speed. This refers to taking pictures of wildlife, sports, or action scenes.

A long shutter speed would make the moving target appear soft and blurred, such as when capturing the moving water of a waterfall, or the motion of waves.

So, while you worry about the appropriate shutter speed, the camera will take care of the rest.

4. Program: P

This mode is sort of in between aperture/shutter priority and manual control. With program mode, you can set either the aperture or the shutter speed while the camera preserves the correct exposure by modifying the one that wasn't set. This gives you more freedom to be creative without having to keep switching between shooting modes.

5. Manual: M

Chapter Eight: Commons Mistakes II

- **DSLR Camera Straps**

DSLRs are expensive. Photographers know that very well. And yet some people seem to trust themselves to never drop it by carrying it in their hands without any form of protection against a possible fall. But it only takes one mistake for the camera to slip out of your hands and break. Even the most experienced and alert photographer can get tired, have sweaty palms, a weak grip, or shaky hands.

To keep your camera safe, you should always wear a camera strap. If you find a body strap inconvenient, you should at least wear a wrist strap. Don't go with the small strap that is usually included with the DSLR. Invest in one that is more durable.

To keep your camera safe, you should always wear a camera strap. If you find a body strap inconvenient, you should at least wear a wrist strap. Don't go with the small strap that is usually included with the DSLR. Invest in one that is more durable.

- **Battery Mistakes:**

Once you have taken note of all the above mistakes, it is time to look at a few other common mistakes concerning the battery. A dead battery is every photographer's nightmare. You might have just lined up the perfect shot or have been waiting a while to get one, when the DSLR shuts down because the battery is drained.

What are you doing that could drain the battery so fast?

1. Using the LCD Screen

If you use the LCD screen and not the viewfinder to get the right shot, you should stop. The LCD is one of the biggest reasons behind battery drain, because it uses an insane amount of battery power. The screen is an extra feature and definitely not necessary to capture your pictures.

Chapter Ten: Guide to Building Your DSLR Gear II

- **Camera Bag:**

There is not really a particular thing to consider when getting a camera bag. You only need some common sense in order to get the right camera bag. If it feels comfortable enough and your camera equipment fits inside, then take it. When browsing for the perfect bag, you should keep the type of photography you want to do in mind.

1. Landscape photographers: Since you will most probably travel long distances to get the perfect landscape shots, a hiking backpack might be the best fit for all the camera equipment.

keep the type of photography you want to do in mind.

1. Landscape photographers: Since you will most probably travel long distances to get the perfect landscape shots, a hiking backpack might be the best fit for all the camera equipment.

2. Wedding photographers: This is very diverse and depends on your personal requirements and the amount of equipment you will have to carry. You might need anything from a shoulder bag to a rolling suitcase.

3. Studio photographers: You might not need a bag for this type of photography if you don't leave the studio. The only time you might need one is when transferring the camera equipment by car or airplane. A rolling suitcase is the best fit for this situation.

4. Vacation photographers: You will most likely only need a shoulder bag for this type of photography. Because you will be on the move most of the time and see a lot of interesting things, you will need quick access to the camera and be as comfortable as possible.

- **Memory Card:**

This mode gives you full control over every feature. You will have to determine the aperture, shutter speed, and exposure, yourself. There will be an indicator in the viewfinder or the screen to let you know how appropriate the exposure is, but you will have to change the aperture and shutter speed in order to reach the correct exposure.

- **Understanding ISO:**

ISO measures the sensitivity of the DLR's sensor to light. The word originally comes from film photography where different sensitivities of film were used based on the shooting conditions. It still works the same way with digital photography.

ISO sensitivity is numbered from ISO100, which refers to low sensitivity, to ISO 6400 and greater, which refers to high sensitivity, and manages the amount of light that the sensor needs to achieve the given exposure.

Low sensitivity means more light is needed to reach the given

sensitivity, to ISO 6400 and greater, which refers to high sensitivity, and manages the amount of light that the sensor needs to achieve the given exposure.

Low sensitivity means more light is needed to reach the given exposure, whereas high sensitivity needs less light to reach that same exposure. For example:

- 1. Low ISO:**

When shooting on a bright and sunny day, it means that a lot of light will hit the sensor at the time of an exposure, so the sensor doesn't have to be sensitive in order to reach the correct exposure. You should then use a low ISO number, like 100 or 200, to give pictures the highest possible quality with minimal noise.

- 2. High ISO:**

When shooting in conditions with low light, like a museum or cathedral, there won't be much light accessible for the camera sensor. High ISO numbers such as ISO 3200, increases the sensitivity of the camera sensor and multiplies the available light so that you can have a correctly exposed picture. But this also increases the noise on the

lens. The lens will allow you to get extremely close to a target while creating pictures that are life-size.

All lenses have a number in millimeter, for example, 25mm. This number is called the focal length. It indicates how far a lens can zoom. The higher the number, the more it can zoom. Telephoto lenses are an example of these and go from 85 and up. They are like telescopes which can magnify things at quite a distance. Wide-angle lenses, or prime lenses, are an example of a lower number lens and go from 28 and less. They have more of a sweeping view. Anything in between, such as 50mm, is considered a normal lens.

Lenses used for each type of photography:

1. Portrait Lenses - A 50mm prime lens is mainly used for this type of photography. There are cheap and expensive versions. You can also consider using a telephoto lens if you don't want to be up in your client's face when taking a photo of them.

2. Landscape Lenses - You should get a wide-angle lens for this kind of photography. It is very important to get a wide shot for landscape

photography. There are cheap and expensive versions. You can also consider using a telephoto lens if you don't want to be up in your client's face when taking a photo of them.

2. Landscape Lenses - You should get a wide-angle lens for this kind of photography. It is very important to get a wide shot for landscape photos so that you can see as much as possible up close through the lens.

3. Sports Lenses - A 400 mm prime lens is best for this kind of photography, but a telephoto lens can also be used for close-up shots without getting close to the action.

4. Automotive Lenses - There is no special lens for this kind of photography. A wide lens would be a good benefit, but that just depends on what kind of pictures you want to capture with a car.

[Introduction](#)

[Chapter One: Getting Started](#)

[Chapter Two: Know your DSLR in Depth](#)

[Chapter Three: What to know before you buy](#)

[Chapter Four: DSLR Buying Guide - Part II](#)

[Chapter Five: DSLR Shooting Guide](#)

[Chapter Six: DSLR Tips](#)

[Chapter Seven: Common Mistakes to Avoid](#)

[Chapter Eight: Common Mistakes to Avoid - Part II](#)

[Chapter Nine: Guide to Building Your DSLR Gear](#)

[Chapter Ten: Guide to Building Your DSLR Gear - Part II](#)

[About author](#)

[Books by author](#)

[Chapter Ten: Guide to Building Your DSLR Gear - Part II](#)

[About author](#)

[Books by author](#)

[Legal Stuff](#)

people to just leave it on automatic point selection with the thought that the camera will be capable of setting the correct focus point.

When selecting a focus point, it should be fairly easy to switch the active point by either using the directional buttons or one of the dials.

When selecting the correct focus point, you enable the camera to focus where you want it to. Just keep practicing and you will soon be able to adjust the focus point without having to take the camera away from your eye.

To make it easier, set the DSLR to use a single focus point. You will then be able to pick what you want to focus on, making certain that the target is in focus. Once familiar with these features, you will be able to try the more advanced modes that the DSLR has to offer.

To make sure that the edits you make on the computer shows the correct colors, you should have the right monitor. The monitor must be an 8-bit or 10-bit IPS panel monitor. With this, the monitor will show the best range of colors and the best color reproduction.

But just having the correct monitor doesn't mean that it is ready to use right out of the box. You will have to calibrate it first with external calibration hardware that measures a monitor's colors with the most accurate profile. The best companies for this type of equipment are ColorMunki and Datacolor.

